VERSION WITH MARKINGS TO SHOW CHANGES MADE

The claims have been amended as follows.

1. (Thrice Amended) A method of gene analysis by detecting hybridization between a probe nucleic acid and a sample nucleic acid comprising a target sequence complementary to that of the probe nucleic acid, wherein at least one of the probe nucleic acid and the sample nucleic acid is DNA, said method comprising:

providing a substrate on which either the probe nucleic acid or the sample nucleic acid is immobilized,

adding the other non-immobilized probe nucleic acid or non-immobilized sample nucleic acid on the substrate, said other non-immobilized probe nucleic acid or non-immobilized sample nucleic acid being labeled with a ~~flourescent~~fluorescent substance,

performing hybridization of the probe nucleic acid and the sample nucleic acid in the presence of a sequence-non-specific double-stranded DNA-binding protein having a function to stabilize a complementary double-stranded DNA,

detecting the hybridization of the probe nucleic acid and the sample nucleic acid from the presence of said ~~flourescent~~fluorescent substance, thereby producing a hybridization signal having a hybridization signal intensity, and

performing gene analysis based on the hybridization detected, said gene analysis comprising one or more steps selected from the group consisting of detecting deleted regions, detecting the presence or absence of a mutation, mapping gene location, detecting mismatch and complete match, and detecting nucleotide sequence of the sample nucleic acid.

3. (Amended) The method according to claim 1, wherein the sequence-non-specific double-stranded DNA-binding protein is derived from a hyperthermophilic bacterium.

4. (Amended) The method according to claim 1, wherein the sequence-non-specific double-stranded DNA-binding protein is derived from an archaebacterium.

5. (Amended) The method according to claim 1, wherein the sequence-non-specific double-stranded DNA-binding protein is derived from a bacterium belonging to the genus *Sulfolobus*.

6. (Amended) The method according to claim 1, wherein the sequence-non-specific double-stranded DNA-binding protein is derived from *Sulfolobus solfataricus*.

7. (Twice Amended) The method according to claim 1, wherein the sequence-non-specific double-stranded DNA-binding protein is a Sso7d protein derived from *Sulfolobus solfataricus*.

8. (Twice Amended) The method according to claim 1, wherein the sequence-non-specific double-stranded DNA-binding protein has a homology of 75% or more with the amino acid sequence of SEQ ID NO: 9.

10. (Thrice Amended) The method according to claim 1, wherein the amount of the sample nucleic acid comprising the target sequence is analyzed based on the intensity of athe hybridization signal obtained from the hybridization of the sample nucleic acid and the probe nucleic acid, said hybridization signal being ~~represented~~identified by the presence of said ~~flourescent~~fluorescent substance after hybridization.

13. (Thrice Amended) A test kit for detecting hybridization between a probe nucleic acid and a sample nucleic acid comprising a target sequence complementary to that of the probe nucleic acid according to the method of claim 1, which test kit comprises at least a sequence-non-specific double-stranded DNA-binding protein having a function to stabilize a complementary double-stranded DNA, and an immobilized probe nucleic acid or non-immobilized probe nucleic acid labeled with a fluorescent substance.